

Remarks

Claims 2, 4, 8-14 and 17-20 are be pending in the application. Claims 12-14 have been withdrawn from consideration. Claim 19 has been amended. Claims 1, 3, 5-7, 15 and 16 have been canceled.

The various parts of the Office Action are discussed below under appropriate headings.

Claim Rejections - 35 U.S.C. § 112

Claims 2-4, 8-11 and 16-20 have been rejected under 35 U.S.C. §112, first paragraph, as failing to comply with the written description requirement. The Examiner contends that there is no support for the phrase recited in claim 19 of “the outer coating being free of amino resin” in the specification.

Applicant has amended claim 19 to recite that the outer coating consists essentially of an amino-silane adhesion promoter. Support for the amendment can be found at least in original claims 3 and 5, and in the specification at page 2, lines 16-17. In view of the amendment, Applicant respectfully requests withdrawal of the rejection.

Claim 16 is has been rejected under 35 U.S.C. §112, second paragraph, as being indefinite. The Examiner contends that the phrase “wherein the silane adhesion promoter is an amino silane adhesion promoter” in claim 16, lines 1-2 is vague and indefinite. In view of the cancelation of claim 16, the rejection is moot.

Claim Rejections – 35 U.S.C. §103

Claims 2-4, 8-11 and 17-20 have been rejected under 35 U.S.C. §103(a) as obvious over Döhring (WO 00/44984) published August 3, 2000, with evidence by Döhring (US 6,835,421), which is interpreted as being the English language equivalent of ‘984 and claims priority to (‘984) in view of O'Dell et al. (US 5,545,476). The Examiner contends that it would have been obvious to use an adhesion promoter that is free of an amino resin as taught by O'Dell (‘476) in Döhring (‘984) in order to promote the aesthetic laminate with better initial wear resistance.

Applicant respectfully traverses the rejection for at least the following reasons. Claim 19 has been amended to recite a paper for a laminate panel comprising: a first layer comprising a resin impregnated decorative paper or a resin impregnated overlay; and a second layer of abrasion resistant particles uniformly distributed on and adhered to the first layer, wherein the abrasion resistant particles have an outer coating *consisting essentially of an amino-silane adhesion promoter*.

It is the central concept of the present invention to coat the abrasion resistant particles with an adhesion promoter before the particles are applied onto the decorative or overlay paper. As it is described in the third paragraph on page 2 of the specification, the particles are most preferably dried before they are used, which makes them particularly easy to handle. The reason for this is that the dried and coated particles can be spread by means of a roller with cavities so that a particularly uniform sprinkling of the particles onto a decorative or overlay paper can be achieved. In particular, the adhesion promoter coating enables the integration of the particles into the resin matrix. Applicant found that without such a coating, an optically visible boundary surface remains between the abrasion resistant particles and the resin, which leads to a graying effect. Further, without the coating, the abrasion resistant particles tend to be torn out of the matrix, leading to poor abrasion values.

The inventive idea and the advantages resulting therefrom, i.e., of coating the abrasion resistant particles with an adhesion promoter consisting essentially of an amino-silane adhesion promoter, are nowhere described in the cited prior art, nor can they be derived therefrom.

Döhring ('984) teaches the addition of abrasion resistant particles to a special dispersion containing 100 parts of amino resin (melamine resin), 0.5 to 2.5 parts of a silane adhesion promoter, 5 to 25 parts of a flow promoting agent, 0.1 to 0.4 parts of a wetting agent and 0.05 to 0.4 parts of a separating agent. In a next step, the whole dispersion, including the abrasion resistant particles, is applied to the paper and the same is subsequently dried, and respectively used for the production of laminate flooring materials. For this reason alone, it appears incorrect to assume that the abrasion resistant particle in Döhring ('984) are "coated with an adhesion promoter" as recited in the present claims. Döhring does not teach to coat any abrasion resistant particles, but merely to use a dispersion consisting essentially of a melamine resin and

further additional means for the manufacture of a laminated flooring materials. Nevertheless, even if one would consider the proceedings described in Döhring as “coating” of the abrasion resistant particles, the “coating” consists predominately of melamine resin with only a small amount of silane adhesion promoter, whereas according to claim 19, as amended, the coating on the abrasion resistant particles consists essentially of the amino-silane adhesion promoter.

The same observation applies to O'Dell ('476). Similar to Döhring, O'Dell teaches to prepare a special dispersion containing so-called precured resin particles, water, binder material in the form of microcrystalline cellulose (CMC) and abrasion resistant particles. (See, for example, col. 5, lines 47-54 of O'Dell.) In Examples I and II of columns 9 and 10, abrasion resistant particles are added to a mixture comprising a larger amount of liquid melamine resin and precured melamine resin particles as well as binder (Example II). Thus, even if one would consider this process of adding abrasion resistant particles to a mixture consisting essentially of melamine resins as “coating” of the abrasion resistant particles, the coating itself would consist essentially of melamine resin and binder material, and not of the adhesion promoter, as in the paper currently claimed. Accordingly, even if one skilled in the art were motivated to combine the teachings of Döhring ('984) with those of O'Dell, the resulting combination would not include all of the claimed features of the present invention. Because prima facie obviousness has not been established, the rejection of claims 2-4, 8-11 and 17-20 under 35 U.S.C. §103(a) should be withdrawn.

Claims 2-4, 8-11 and 17-20 have been rejected under 35 U.S.C. 103(a) as obvious over Döhring et al. (US 2003/0138600) in view of O'Dell et al. (US 5,545,476). Applicant respectfully traverses the rejection for at least the following reasons. Döhring ('600) is similar to Döhring ('984) in that it does not teach to coat any abrasion resistant particles, but merely to use a dispersion consisting essentially of a melamine resin and further additional means for the manufacture of a laminated panel. Döhring ('600) teaches the addition of abrasion resistant particles to a special dispersion containing 100 parts of amino resin (melamine resin), 0.5 to 2.5 parts of a silane adhesion promoter, 5 to 25 parts of a flow promoting agent, 0.1 to 0.4 parts of a cross-linking medium and 0.05 to 0.4 parts of a separating agent. In a next step, the whole

dispersion, including the abrasion resistant particles, is applied to the paper and the same is subsequently dried, and respectively used for the production of laminate panels. As in the previous rejection, even if one skilled in the art were motivated to combine the teachings of Döhring ('600) with those of O'Dell, the resulting combination would not include all of the claimed features of the present invention. Because prima facie obviousness has not been established, the rejection of claims 2-4, 8-11 and 17-20 under 35 U.S.C. §103(a) should be withdrawn.

Claims 8-9 have been rejected under 35 U.S.C. 103(a) as being unpatentable over Döhring (WO 00/44984) published August 3, 2000 with evidence by Döhring (US 6,835,421) which is interpreted as being the English equivalent of ('984) and claims priority to ('984) in view of O'Dell et al. (US 5,545,476) and Jaisle et al. (US 4,473,613).

Applicant respectfully traverses the rejection for at least the following reasons. As discussed above, the combination of Döhring ('984) and O'Dell et al. fails to disclose or suggest a paper for a laminate panel comprising: a first layer comprising a resin impregnated decorative paper or a resin impregnated overlay; and a second layer of abrasion resistant particles uniformly distributed on and adhered to the first layer, wherein the abrasion resistant particles have an outer coating consisting essentially of an amino-silane adhesion promoter. The decorative laminate of Jaisle et al. includes a décor sheet impregnated with a first blend of a melamine/formaldehyde resin and an acrylic resin and a second blend of a melamine/formaldehyde resin and abrasive particles. Jaisle et al. also fails to disclose or suggest a paper that includes a layer of abrasive particles having an outer coating consisting essentially of an amino-silane adhesion promoter. Therefore, even if the combined teachings of Döhring ('984) and O'Dell et al. were to be combined with the teachings of Jaisle et al., the result would not be the paper of claims 8 and 9. Accordingly, Applicant respectfully requests withdrawal of the rejections of claims 8 and 9 under 35 U.S.C. §103(a).

Claim 16 has been rejected under 35 U.S.C. 103(a) as being unpatentable over Döhring (WO 00/44984) published August 3, 2000 with evidence by Döhring (US 6,835,421) which is interpreted as being the English equivalent of ('984) and claims priority to ('984) in view of O'Dell et al. (US 5,545,476) and Shirono et al. (WO

01/21529) with Shirono et al. (US 6,994,834) interpreted as being the English equivalent of ('529). Claim 16 has also been rejected under 35 U.S.C. 103(a) as being unpatentable over Döhring et al. (US 2003/0138600) in view of O'Dell et al. (US 5,545,476) and Shirono et al. (WO 01/21529) with Shirono et al. (US 6,994,834) interpreted as being the English equivalent of ('529). In view of the cancelation of claim 16, the rejections are moot.

Conclusion

In view of the foregoing amendment and remarks, request is made for timely issuance of a notice of allowance.

Respectfully submitted,

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